

Claims

[c1] What is claimed is:

1.A driving circuit of a liquid crystal display device comprising:

a substrate;

at least two driver integrated circuit (IC) chips positioned on the substrate; and

an impedance device electrically connected between the two driver IC chips for reducing a difference between respective input voltages being input into the two driver IC chips.

[c2] 2.The driving circuit of claim 1 wherein the substrate comprises a plurality of scanning lines and a plurality of signal lines thereon.

[c3] 3.The driving circuit of claim 2 wherein the driver IC chips are used for outputting switching or addressing signals to the scanning lines.

[c4] 4.The driving circuit of claim 2 wherein the driver IC chips are used for outputting image signals to the signal lines.

- [c5] 5.The driving circuit of claim 2 wherein the impedance device comprises a resistor and a capacitor, the resistor and the capacitor being electrically connected in parallel with each other.
- [c6] 6.The driving circuit of claim 5 wherein the substrate comprises a first metal layer, a second metal layer, and an insulation layer interposed between the first metal layer and the second metal layer.
- [c7] 7.The driving circuit of claim 6 wherein the resistor comprises at least a first conductive wire.
- [c8] 8.The driving circuit of claim 7 wherein both of the first conductive wire and the scanning lines are parts of the first metal layer.
- [c9] 9.The driving circuit of claim 7 wherein both of the first conductive wire and the signal lines are parts of the second metal layer.
- [c10] 10.The driving circuit of claim 6 wherein the scanning lines are parts of the first metal layer, and the signal lines are parts of the second metal layer.
- [c11] 11.The driving circuit of claim 10 wherein the capacitor comprises a second conductive wire that is a part of the first metal layer, a third conductive wire that is a part of

the second metal layer, and the insulation layer interposed between the second conductive wire and the third conductive wire.

[c12] 12.The driving circuit of claim 1 wherein a transparent conductive layer is positioned between each of the driver IC chips and the impedance device, each of the driver IC chips being capable of receiving an approximately identical input voltage through each of the transparent conductive layers.

[c13] 13.The driving circuit of claim 1 wherein the liquid crystal display device is designed by applying wiring on array (WOA) technology, and the liquid crystal display device is driven by the driving circuit.

[c14] 14.A liquid crystal display device comprising:
a first substrate;
a second substrate opposite to and in parallel with the first substrate, the second substrate comprising a plurality of pixels arranged in a matrix; and
a driving circuit positioned on the second substrate for outputting signals to the pixels, the driving circuit comprising:
at least two driver integrated circuit (IC) chips positioned on the second substrate; and
an impedance device electrically connected between the

two driver IC chips, the impedance device having a resistor and a capacitor being electrically connected in parallel with each other for reducing a difference between respective input voltages being input into the two driver IC chips.

- [c15] 15.The liquid crystal display device of claim 14 wherein the driving circuit is a scanning line driving circuit.
- [c16] 16.The liquid crystal display device of claim 14 wherein the driving circuit is a signal line driving circuit.
- [c17] 17.The liquid crystal display device of claim 14 wherein the resistor comprises at least a first conductive wire.
- [c18] 18.The liquid crystal display device of claim 14 wherein the capacitor comprises a second conductive wire, a third conductive wire, and an insulation layer interposed between the second conductive wire and the third conductive wire.
- [c19] 19.The liquid crystal display device of claim 14 wherein a transparent conductive layer is positioned between each of the driver IC chips and the impedance device, each of the driver IC chips being capable of receiving an approximately identical input voltage through each of the transparent conductive layers.